

ABSTRACT OF THE DISCLOSURE

To effectively crystallize an amorphous semiconductor film comprising silicon by utilizing nickel element and remove nickel element contributed to the crystallization, a mask 103 is provided 5 on an amorphous silicon film 102, oxide film patterns 107 and 108 including nickel are formed, phosphorus is doped in a region 109, thereafter, heating is performed, nickel element is diffused via paths 110 and 111 and nickel element diffuses in the amorphous silicon film and gettered by phosphorus at the region 109 by which 10 crystallization of diffusion of nickel and gettering of nickel can be carried out simultaneously.